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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of
Inventor(s): Mills



Group Art Unit: 1754

Appln. No.: 09/110,678

Examiner: Langel

Filing Date: 7/7/1998

Title: INORGANIC HYDROGEN COMPOUNDS AND APPLICATIONS THEREOF

RECEIVED
JUN 11 2001
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June 8, 2001

**SUBMISSION OF EXPERIMENTAL EVIDENCE FURTHER DEMONSTRATING THE
EXISTENCE OF LOWER-ENERGY HYDROGEN**

Hon. Asst. Commissioner
of Patents and Trademarks
Washington, D.C. 20231

Sir:

Attached is a Rule 132 Declaration of Applicant submitting additional experimental evidence that conclusively demonstrates the existence of lower-energy hydrogen.

Applicant maintains that the Secret Committee of Examiners assigned to prosecute this application has utterly failed to present a prima facie case of non-enablement and/or lack of utility under 35 U.S.C. §§ 101 and 112. To the extent that the Secret Committee raises even a coherent argument addressing these issues, those arguments are completely rebutted by the extensive experimental evidence already of record.

With the present submission, Applicant now goes even further by presenting novel spectral data from hydrogen atoms undergoing a catalyzed transition to lower-energy states. The use of spectral lines to identify hydrogen atoms has been well

known for over 100 years. Indeed, spectral data from hydrogen atoms is a basis for the atomic theories of Bohr, Schrodinger, and Heisenberg. Therefore, Applicant's reliance on such spectral data from hydrogen atoms to confirm the presence of lower-energy hydrogen cannot be summarily dismissed. Applicant demands that this evidence be considered and assigned the same high level of credibility given to the spectral lines used to identify the uncatalyzed energy states of hydrogen.

Applicant's declaration includes an article entitled "Spectral Emission of Fractional Quantum Energy Levels of Atomic Hydrogen from a Helium-Hydrogen Plasma and the Implications for Dark Matter." The extreme ultraviolet spectroscopic data presented in the article conclusively confirm the existence of lower-energy hydrogen having fractional quantum states $H(1/p)$, where p is an integer. The reaction vessel only contained hydrogen atoms and helium catalyst. All of the spectral lines for helium and ordinary hydrogen are well known and documented. The new emission lines shown in the figures included in the article were identified at energies of $q/13.6\text{eV}$, where $q = 1, 2, 3, 4, 6, 7, 8, 9$ and 11 . Note that the intensity of the new emission lines increased over time as the concentration of lower-energy hydrogen increased during the reaction in the reaction vessel, thus further confirming the formation of lower-energy hydrogen.

From Table 1 in the article, it is remarkable how closely Applicant's predicted peaks for the energy of reaction for formation of lower-energy hydrogen matched the experimentally observed peaks to three significant figures. From Table 8 in the article, it is remarkable how closely Applicant's predicted peaks for the energy of reaction for formation of lower-energy hydrogen matched the peaks observed from the sun.

The Rule 132 Declaration of Applicant also includes an article entitled "Spectroscopic Identification of a Novel Catalytic Reaction of Potassium and Atomic Hydrogen and the Hydride Ion Product." This article conclusively demonstrates the formation of a hydride ion $H^-(1/4)$, also referred to as a lower-energy hydrogen ion. The novel hydride ion is identified spectroscopically at 110 nm corresponding to its predicted binding energy of 11.2 eV using a highly sophisticated extreme ultraviolet

radiation spectrometer. Remarkably, Applicant's predicted binding energy of 11.2 eV for $H^-(1/4)$ matched the experimentally measured value to three significant figures.

The extreme ultraviolet spectroscopic data presented and shown in Figure 3 of the article conclusively demonstrates that (1) intense extreme ultraviolet (EUV) emission was observed from atomic hydrogen; and (2) an atomized catalyst formed a plasma in a cell that was only heated to moderate temperatures with no high voltage source. The plasma was fueled by Applicant's novel method of forming lower-energy hydrogen. No emission or plasma was observed in the case of the control noncatalysts.

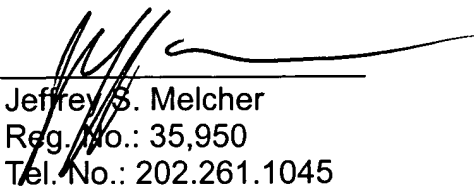
Also enclosed are new chapters for Applicant's textbook, which was previously made of record. The new chapters are "Magnetic Parameters of the electron (Bohr Magneton)," pp. 70-119, and "Atomic Coulomb Field Collapse - Hydrino Theory Blacklight Process," pp. 165-189. These new chapters further demonstrate the accuracy of Applicant's theory, which is a true theory in the sense that an atomic parameter is derived from first principles and then experimentally verified to a high degree of accuracy.

In view of the overwhelming evidence already of record and the conclusive experimental evidence submitted herewith demonstrating the existence of lower-energy hydrogen, it is sincerely believed that the subject application is once again in condition for allowance and Notice to that effect is respectfully requested.

Respectfully submitted,

Manelli Denison & Selter, PLLC

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